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1635 EV

	Application Number	09/734,847
TRANSMITTAL	Filing Date	December 12, 2000
FORM	First Named Inventor	C. Frank Bennett
	Art Unit	1635
be used for all correspondence after initial filing)	Examiner Name	Tracy Ann Vivlemore
Number of Deces in This Cubmission	Attaca and Darahart Monather	10100470 400 (IODI LOCO4)

Total Number of Pages in This	s Submission	Attorney Docket I	Number	ISIS0170-1	100 (ISPH-0524)	ノ
ENCLOSURES (check all that apply)						
Fee Transmittal Form		☐ Drawing(s)		After Allowance Communication to		2
Fee Attached		Licensing-related Papers			Communication to Board als and Interferences	
Amendment / Reply		Petition			Communication to TC lotice, Brief, Reply Brief)	
After Final		Petition to Convert to a Provisional Application		Proprieta	ary Information	
Affidavits/declaration	u(s)	Power of Attorney, Revocation Change of Correspondence Ac	Idress	Status Le	etter .	
Extension of Time Reque	est	Terminal Disclaimer		Other En	nclosure(s) lentify below):	
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Certified Copy of Priority Document(s)	R	emarks	<u>'</u>			一
Reply to Missing Parts/ Incomplete Application						
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	SIGNAT	URE OF APPLICANT, ATTO	ORNEY, OI	R AGENT		
Firm	Co	zen O'Connor, P.C.				
Signature		Def				
Printed Name	Pa	ul K. Legaard				
Date	Ma	arch 24, 2005	Reg. No.	38,534		
	CI	ERTIFICATE OF TRANSMIS	SION/MAI	LING		
I hereby certify that this cor Service with sufficient post Alexandria, VA 22313-1450	age as first c	s being facsimile transmitted to class mail in an envelope addr own below.	the USPTO essed to: C	or deposited Commissioner	with the United States Pos for Patents, P.O. Box 145	tal i0,
Signature	P	ekl.	>			
Typed or printed name	Paul K. Legaa	ard		Date	March 24, 2005	

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents Washington, DC 20231

Sir:

POWER OF ATTORNEY WITH REVOCATION AND CHANGE OF CORRESPONDENCE ADDRESS

I hereby revoke all previous powers of attorney or authorizations of agent given in th	e
applications identified in Table A attached hereto, and appoint	

I hereby revoke all previou	is powers of attorney or au	thorizations of agent given in the
applications identified in Table A	attached hereto, and appoin	nt
X Practitioners at Cu	stomer Number: 34138	PLACE CUSTOMER NUMBER BAR CODE LABEL HERE
as my/our attorney(s) or agent(s) t	o prosecute the application	identified above, and to transac
all business in the United States Pa	atent and Trademark Offic	e connected therewith.
Please change the Corr A to:	espondence Address for al	l applications identified in Table
	stomer Number: 34138	
I am the:		
☐ Applicant/Inventor	r.	
Assignee of record is enclosed.)	d of the entire interest. (A s	statement under 37 CFR 3.73(b)
	Respectfully submitted	,
	ISIS PHARMACEUTI	CALS, INC.
Date: 3/16/05	By:	
,	Name: Laura A. Handl Title: Vice President	ey



TABLE A

Alteration Of Cellular Behavior By Antisense Modulation Of mRNA Processing Methods Of Obtaining Active Antisense Compounds	chavior By Antisense rocessing	ctive Antisense	ctive Antisense ctive Antisense ctive Antisense ctive Antisense ucleotide Libraries For m	ctive Antisense ctive Antisense ctive Antisense ctive Antisense man f MYD88 Expression	ctive Antisense ctive Antisense ctive Antisense ctive Antisense croceotide Libraries For on family and family	ctive Antisense ctive Antisense ctive Antisense ctive Antisense moleotide Libraries For m	ctive Antisense cocessing ctive Antisense ctive Antisense man f MYD88 Expression f TRADD Expression	ctive Antisense ctive Antisense ctive Antisense crocessing ctive Antisense from from from from from from from from
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assistant Commissioner for Patents Washington, DC 20231

Sir:

STATEMENT UNDER 37 CFR 3.73(b)

Applicant, ISIS Pharmaceuticals, Inc., a corporation, states that it is:

X the assignee of the entire right, title, and interest of the applications identified in Table A attached hereto.

The extent (by, percentage) of its ownership interest is 100% in the patent applications identified in Table A by virtue of:

a copy of the pertinent assignment from the inventor(s) of the patent applications identified in Table A is enclosed herewith.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Respectfully submitted,

ISIS PHARMACEUTICALS, INC.

Date: $\frac{3/16/05}{}$

Name: Laura A. Handley

Title: Vice President

PATENT

ASSIGNMENT

WHEREAS, We, C. Frank Bennett, of Carlsbad, State of California; Stanley T. Crooke, of Carlsbad, State of California, Muthiah Manoharan, of Carlsbad, State of California, Jacqueline Wyatt, of Encinitas, State of California, Brenda F. Baker, of Carlsbad, State of California, Brett P. Monia of La Costa, State of California, Robert McKay of San Diego, State of California; and James G. Karras, of San Marcos, State of California, have invented a certain invention entitled Alteration of Cellular Behavior by Antisense Modulation of mRNA Processing, for which we have made application for Letters Patent of the United States, said application having been filed December 12, 2000 and assigned Application No. 09/734,847; and

WHEREAS, ISIS Pharmaceuticals, Inc. hereinafter referred to as the assignee, of 2292 Faraday Avenue, Carlsbad CA, a corporation of Delaware, is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to each of us in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and

renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees. representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

PATENT ·

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, we have hereunto set our hands and seals.

DATED: 2-15, 2001

C. FRANK BENNETT

State of California

ss.

County of San Diego

On this 15th day of 12th day, 2001, before me, the undersigned, a Notary Public for the state, personally appeared C. Frank Bennett, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.

WITNESS my hand and official seal.

LANE B.D. SCHWARTZ
Commission # 1196197
Notary Public - California
San Diego County
My Comm. Expires Sep 13, 2002

Signature of Notary

		///	
DOCKET NO.: ISPH-0524		///	PATENT
DATED: $\frac{\lambda \left(\frac{0}{0} \right)}{2001}$	STAN	EY T. CROOKE	
State of California)		
County of San Diego) ss.)		
On this /stanley T. Crooke, person of satisfactory evider foregoing Assignment as same in his authorized Assignment the person, acted, executed the Assignment as a same in the person, acted, executed the Assignment the person acted.	Public for the sonally known to nce to be the and acknowledge capacity, and or the entity	o me/p roved to ma e person who su d to me that he that by his sig	lly appeared on the basis abscribed the executed the nature on the
LANE B.D. SCHWARTZ Commission # 1196197 Notary Public - California San Diego County My Comm. Expires Sep 13, 2002	WITNESS my ha	and and official Notary	seal.
DATED: <u>Feb 01</u> , 2001	мугн	husiah /hu	when_
State of California)) ss.		
County of San Diego)		•
On this 154 undersigned, a Notary Muthiah Manoharan, per hasis of satisfactory the foregoing Assignme executed the same in h his/her signature on t behalf of which the pe	sonally known couldence to be nt and acknowle is/her authorishe Assignment	to me/ proved to the person who edged to me that zed capacity, an the person, or t	me on the subscribed he/she d that by he entity on
LANE B.D. SCHWARTZ Commission # 1196197 Notary Public - Californic San Diego County	musignature of	and and official	seal.

DOCKET NO.: ISPH-0524	PATENT
DATED: <u>\(\frac{1}{2}\)\(\left\)\(\left\), 2001</u>	JACQUELINE WYATT
State of California)	ss.
County of San Diego)	
Jacqueline Wyatt, personally hasis of satisfactory evident the foregoing Assignment and the same in her authorized	of <u>flying</u> , 2001, before me, the c for the state, personally appeared y known to me/proved to me on the nee to be the person who subscribed d acknowledged to me that she executed capacity, and that by her signature on or the entity on behalf of which the Assignment.
Commission # 1196197 Notary Public - California San Diego County	NESS my hand and official seal. And Church nature of Notary BRENDA F. BAKER
State of California) County of San Diego)	SS.
On this /87 day undersigned, a Notary Public	of <u>February</u> , 2001, before me, the c for the state, personally appeared known to me/proved to me on the basis
of satisfactory evidence to foregoing Assignment and ac same in her authorized capacity	be the person who subscribed the knowledged to me that she executed the city, and that by her signature on the he entity on behalf of which the
LANE B.D. SCHWARTZ Commission # 1196197 Notary Public - California San Diego County My Comm. Expires Sep 13, 2002	NESS my hand and official seal. Many NESS my hand and official seal.

DOCKET NO.: ISPH-0524	PATENT
DATED: 2/1, 2001 BRETT P. MONIA	
State of California)) ss. County of San Diego)	
On this day of Ebruary, 2001, a undersigned, a Notary Public for the state, personal Brett P. Monia, personally known to me/proved to me of satisfactory evidence to be the person who subscriptoregoing Assignment and acknowledged to me that he same in his authorized capacity, and that by his signal Assignment the person, or the entity on behalf of whe person acted, executed the Assignment.	on the basis ribed the executed the gnature on the
LANE B.D. SCHWARTZ Commission # 1196197 Notary Public - California San Diego County My Comm. Expires Sep 13, 2002 Signature of Notary	l seal.
DATED: 2/13, 2001 ROBERT MCKAY	
State of California)) ss. County of San Diego)	
On this 13th day of Isluming, 2001, undersigned, a Notary Public for the state, personal Robert McKay, personally known to me/proved to me of satisfactory evidence to be the person who subscribe foregoing Assignment and acknowledged to me that he same in his authorized capacity, and that by his signs acted, executed the Assignment.	n-the basis of ed the executed the gnature on the

LANE B.D. SCHWARTZ
Commission # 1196197
Notary Public - California
San Diego County
My Comm. Expires Sep 13, 2002

WITNESS my hand and official seal.

Signature of Notary

DATED: 1/31 , 2001

JAMES G. KARRAS

State of California

County of San Diego

ss.

LANE B.D. SCHWARTZ
Commission # 1196197
Notary Public - California
San Diego County
My Comm. Expères Sep 13, 2002

WITNESS my hand and official seal.

Signature of Notary

PATENT

ASSIGNMENT

WHEREAS, I, Susan Freier, of San Diego, State of California, am a joint inventor and have invented a certain invention entitled Alteration of Cellular Behavior by Antisense Modulation of mRNA Processing, for which application for Letters Patent of the United States has been made, said application having been filed December 12, 2000 and assigned Application No. 09/734,847; and

WHEREAS, ISIS Pharmaceuticals, Inc. hereinafter referred to as the assignee, of 2292 Faraday Avenue, Carlsbad CA, a corporation of Delaware, is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of the sum of One Dollar (\$1.00) to me in hand paid by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, I, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee,

PATENT

to file in my name applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND I hereby covenant that I have full right to convey the entire interest herein assigned, and that I have not executed and will not execute any agreement in conflict herewith, and I further covenant and agree that I will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said its successors, assigns, nominees, representatives, and I agree to communicate to said assignee or to nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

AND I hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said

PATENT

assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, I have hereunto set our hands and seals.

DATED: Sept 14, 2001

Susan Freier

State of California

ss.

County of San Diego

On this / day of settents 2001, before me, the undersigned, a Notary Public for the state, personally appeared Susan Freier, personally known to me/proved to me on the basis of satisfactory evidence to be the person who subscribed the foregoing Assignment and acknowledged to me that she executed the same in her authorized capacity, and that by her signature on the Assignment the person, or the entity on behalf of which the person acted, executed the Assignment.

LANE B.D. SCHWARTZ
Commission # 1196197
Notary Public - California
San Diego County
My Comm. Expires Sep 13, 2002

WITNESS my hand and official seal.